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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,671	10/16/2003	Monica M. Marugan	GEPL.P-077	2670
21121	7590	12/27/2004	EXAMINER	
OPPEDAHL AND LARSON LLP			ZIMMER, MARC S	
P O BOX 5068				
DILLON, CO 80435-5068			ART UNIT	PAPER NUMBER
			1712	

DATE MAILED: 12/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/605,671

Applicant(s)

MARUGAN ET AL.

Examiner

Marc S. Zimmer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 12-17, 20-22, 29-36, 39-41, 47-53 and 56-61 is/are rejected.
- 7) ☒ Claim(s) 8, 11, 18, 19, 23-28, 37, 38, 42-46, 54 and 55 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim Objections

Claim 61 is objected to because (i) both steps are identified with the same letter and (ii) the first step merely recites a compound without any affirmative action being mentioned.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 7, 12-17, 20-22, 31-36, 39-41, 48-50, 53, 56-58, and 61 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Okumura et al., U.S. patent # 5,45,632.

Okumura discloses the preparation of a polycarbonate-polysiloxane copolymer and its combination with one or more of several materials to form a composition including an admixture of said copolymer and polycarbonate homopolymer, an admixture of said copolymer and a styrenic resin, an admixture of said copolymer and a fluororesin, an admixture of said copolymer and a pigment, etc. (column 9, lines 5-10. For instance, columns 9 and 10 teach a blend of the copolymer and polycarbonate homopolymer

wherein 0.1 to 99.9 wt.% of the former are added to 99.9 to 0.1% of the latter. Column 12, lines 40-68 through column 13, lines 1-6 disclose mixtures of the copolymer and a pigment of which titanium dioxide is preferred, wherein the pigment comprises preferably between 0.1 and 10% by weight of the total.

Relevant to the present discussion, the disclosure (column 15, lines 40-44) also provides for mixtures of the copolymer and any of the other embodiments of component (B) set forth therein (where component (B) is the materials delineated *supra*). Also germane to the Examiner's assertion of unpatentability, the reference repeatedly emphasizes the importance of having a specified content of the polydiorganosiloxane as a weight percentage of the entire composition. For instance, where the copolymer is combined with polycarbonate homopolymer, column 10, lines 44-56 state that the siloxane portion should comprise between 0.02 to 8 percent by weight of the total. See also column 12, lines 36-39 and column 14, lines 53-57 where minimum amounts are prescribed for each of the different combinations of copolymer and component (B).

The skilled artisan will appreciate that, as the weight contribution of the homopolymer is lowered as other materials such as the styrenic polymer are added, the amount of the copolymer and, hence, the amount of the polysiloxane should be left relatively unchanged so as to assure that the problems associated with siloxane content that is too low or too high and taught by the reference are avoided. That is to say, although the reference would appear to anticipate Applicant's requirement that the siloxane comprise at least 3 wt.% of the composition, it is at least obvious in view of the

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description of the drawbacks of having too little siloxane content. Further, it should be noted that Applicant has not anywhere established criticality for this limitation.

Concerning independent claim 31, the first thickness recited therein is arbitrary and can be any thickness whatsoever. Table 2C summarizes the physical attributes of sheets of 1/16" (approximately 1.6 mm) and 1/32" thickness that are made from compositions exemplary of the invention. Most of these demonstrate a flame resistance of V-0 hence the article of claim 31 is anticipated for any first thickness below 1/16".

Concerning independent claim 48, the reference provides for an embodiment wherein the pigment is treated with a silicone oil for the purpose of enhancing dispersibility (column 12, lines 57-59). Accordingly, claims 15-16 and 34-35 are likewise rejected.

As for claim 7, the incorporation of fibril-forming tetrafluoroethylene is contemplated in column 14, lines 58-68 through column 15, lines 1-28.

As for claims 9, 12-14, 17, 20-22, 36, 39-41, 53, and 56-58, auxiliary flame retardants such as alkali metal salts of perfluorinated sulfonic acids and including potassium salt of perfluorobutanesulfonic acid are mentioned in column 16, lines 23-55.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-6, 29-30, 33, 47, 51-52, and 59-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okumura et al., U.S. patent # 5,451,632. The reference discloses a number of styrenic resins having different properties that impart different effects to the composition depending what monomer(s) styrene has been copolymerized with. Concerning claims 4-5 and 51-52, the reference discloses high-impact polystyrene (column 13, lines 10-35) including SBS and ABS that, of course, will be added whenever improvements in impact strength are needed. "It is prima facie obvious to add a known ingredient to a known composition for its known function." *In re Lindner* 173 USPQ 356; *In re Dial et al* 140 USPQ 244. The reference recommends that between 5 and 70% of the styrenic resin be added (column 14, lines 41-47). Likewise, the reference also teaches styrene-acrylonitrile in the same passage.

As for claims 33-37, the reference does not expressly teach molded articles thicker than 1.6 mm. Nonetheless, there does not appear to be any criticality attached to this parameter. Moreover, the skilled artisan will appreciate that similar fire-resistance ratings would inherently be realized for panels exceeding 1.6 mm in thickness given that the composition disclosed by the reference is similarly constituted.

Allowable Subject Matter

Claims 8-11, 18-19, 23-28, 37-38, 42-47, and 54-55 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The reference does not even make cursory mention of phosphate flame retardants nor is it immediately obvious as to why one of ordinary skill would be

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motivated to replace the flame retardants described the reference with phosphates. As for trimethylolpropane as a coating for the titanium dioxide, the reference broadly discloses polyols as treating agents however the size of this genus is so massive that the particularly claimed member of that genus could hardly be considered obvious.

WO 03/044090 (see US 2004/0063824) is cited as being of interest for teaching most aspects of the presently claimed invention with the notable exception that only cursory mention of the polysiloxane-polycarbonate copolymer is made. (The reference states the polycarbonate may be partially comprised of a polysiloxane-polycarbonate copolymer.) There is clearly no emphasis on siloxane content hence this document fails to qualify as a reference. Lupinsky et al., U.S. patent # 5,153,251 and Mei et al., U.S. patent # 6,455,158 are cited as being of interest for their disclosure of benefits associated with coating titanium dioxide with an organic coating.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 571-272-1096. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

December 17, 2004

A handwritten signature in cursive script that reads "Marc Zimmer".

Marc Zimmer
AU 1712